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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,409	10/15/2001	Frank Holm Iversen	6495-07	3178

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EXAMINER

KIM, CHONG HWA

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/977,409

Applicant(s)

IVERSEN ET AL.

Examiner

Chong H. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 24 June 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The Examiner acknowledges the applicant's Amendment filed Jun 24, 2003 in response to the Office action made on Mar 19, 2003 and canceling of claim 11.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the bearing element and the rod eye each including alignment marks as recited in claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nikolaus, U.S. Patent 4,856,366.

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Nikolaus shows, in Figs. 1-17, a hermetically enclosed refrigerant compressor comprising;

a compressor block having a bore extending therethrough (inherent);

a crank shaft 14 positioned for rotation in the bore, the crank shaft defining an eccentric crank pin 12 at one end thereof;

the crank shaft and crank pin cooperating to define an oil channel 38 arrangement;

a connecting rod 18 attached at one end to a bearing element 10 such that there is no relative motion between the bearing element and the connecting rod, the connecting rod having a passage 36 extending therethrough and in communication with a channel 52, 41 formed by the cooperation of the connecting rod and the bearing element;

the crank pin extending into the bearing element and being positioned for rotation relative thereto; and a control arrangement providing communication between the channel and the oil channel arrangement, at least once per revolution of the crank pin (see Fig. 17);

wherein the control arrangement comprises at least one radial bore 52 in the bearing element, which bore overlaps an oil source upon a rotation of the crank pin;

wherein the oil source is formed by an opening 51 in the crank pin and forming part of the oil channel arrangement;

wherein the passage defines an opening into the channel and the radial bore is offset in a circumferential direction relative to the opening;

wherein the connecting rod includes a first connecting rod eye 11 opposite the end attached to the bearing element, the connecting rod eye surrounding a piston bolt 13 having a lubrication channel 43 that overlaps the passage at least once during a revolution of the crank

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pin, the control arrangement establishing the communication between the passage and the channel;

wherein the control arrangement establishes the communication during a suction phase of the compression (see Fig. 17);

wherein the control arrangement further establishes the communication when a compression phase of the compressor begins(see Fig. 17);

wherein the bearing element defines two radial bores 52 arranged at a predetermined distance relative to each other and to the opening of the passage; and

wherein the connecting rod defines a rod eye 16 positioned over the bearing element, the bearing element and the rod eye each include alignment marks 65, 66, 68, 69;

but fails to show the channel extending completely around a circumference of the bearing element.

It would have been obvious to modify the limited channel of Nikolaus by having the channel extend completely around the circumference, since applicant has not disclosed that having the channel extend completely around the circumference solves any stated problem or is for any particular purpose and since applicant disclosed that “(the) oil channel does not have to extend over the whole circumference” on page 11, lines 28-29, it appears that the oil distribution would perform equally well with the channel extended at any length as long as the channel connects two ports.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nikolaus in view of Bushnell, U.S. Patent 6,024,548.

Nikolaus shows, as discussed above in the rejection of claim 1-3, the compressor comprising the crankshaft having the crank pin with the oil channel arrangement but fails to show an oil pocket in an area near the opening on the crank pin.

Bushnell shows, in Fig. 1-3, a compressor comprising a crank pin 40-2 disposed in a bearing element 22 wherein an oil channel arrangement 40-8 is formed in the crank pin, wherein the crank pin defines an oil pocket 40-11 in an area proximate the opening 40-8 forming part of the oil channel arrangement.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the opening of the oil channel of Nikolaus with the oil channel opening having the oil pocket as taught by Bushnell in order to provide a more effective lubricating method whereby the entire contacting surface of the crank pin is distributed with lubricant so that the compressor may last longer.

Response to Amendment

5. The amendment to the drawing filed Jun 24 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the proposed drawing containing the alignment mark 37 having such concaved configuration. Thus, the proposed drawing has not been approved.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

6. Applicant's arguments with respect to the rejection under 35 USC 102 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (703) 305-0922. The examiner can normally be reached on Monday - Friday; 9:00 - 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

chk
August 18, 2003



CHONG H. KIM
PRIMARY EXAMINER